USSR/Biology

FD 721

Card 1/1

Author : Imshenetskiy, A. A. and Ruban, Ye. L.

Title : Cell-less nitrification. I. Growing Nitrosomonas cultures and obtaining autolysates of cells

Periodical : Mikrobiologiya, 23, 271-274, May/Jun 1954

Abstract : A cell-free autolysate capable of effecting nitrification results after a mixture of Nitrosomonas cells and grass powder are crushed in a sterile mortar, and the glass and cell residues have been filtered out. A large quantity of Nitrosomonas is necessary for the production of the autolysate. The required number of cells can not be obtained by culturing Nitrosomonas on dishes containing a gel medium. A sufficient quantity can be obtained, however, by using a deep aeration method of culturing. The resultant autolysate is also free of the cells of heterotrophic microorganisms. Five Soviet references.

Institution : Institute of Microbiology of the Academy of Sciences, USSR; Moscow

Submitted : November 16, 1953

IMSHENETSKIY, A.A.

USSR

Noncellular nitrification. II. Oxidation of ammonia by cell autolyzates from Nitrosomonas. A. A. Imshenetskii and E. L. Ruban (Inst. Microbiol., Acad. Sci. U.S.S.R., Moscow). *Mikrobiologiya* 23, 393-8(1954); cf. *C.A.* 48, 14065c.—Autolyzate filtrates from nitrifying bacteria contain NH_4 and nitrites. In 5 days the NH_4 content drops by 75% or more, sometimes almost 100%. This effect is also observed in presence of added $(NH_4)_2SO_4$. This oxidation of NH_4 forms only relatively small amts. of nitrite. The autolyzate filtrates from heterotrophic organisms generally show higher instead of lower NH_4 content on standing; in both cases the total N content remains the same. The oxidation proceeds in 2 stages, first forming intermediate products and then nitrite; the first stage is more active than the second in autolyzates from nitrifying bacteria. *Nitrosomonas* was used in prepg. the autolyzates; the heterotrophic organisms employed for comparison were *Saccharomyces cerevisiae*, *Pseudomonas* species, and *Mycobacterium rubrum*.

Julian F. Smith

62
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IMSHENETSKIY, A.A.

"Physiology of fungi." V.Lilly and H.Barnett. Reviewed by A.A. Imshenetskii. Mikrobiologiia 23 no.4:498-502 Jl-Ag '54. (MLRA 7:9)
(FUNGI--PHYSIOLOGY)

IMSHENETSKIY, A.A.

USSR/Biology - Bacterial Mutation FD-1413

Card 1/1 : Pub. 73 - 2/11

Author : Imshenetskiy, A. A. and Kasatkina, I. D.

Title : The activity of hydrolytic enzymes and the mutability of Bac. Mesentericus

Periodical : Mikrobiologiya, 23, 6, 648-655, Nov-Dec 1954

Abstract : In an effort to determine the differences in the physiological activity of variants of bacterial species, the characteristics of the amylolytic and proteolytic activities of rugose and smooth forms of Bac. mesentericus were investigated. Under identical culture conditions, more active hydrolytic enzymes were found in cultures of rugose variants of Bac. mesentericus than in cultures of smooth variants, although the rate of reproduction was the same for both variants. The results of the investigations are presented on six charts and a graph. Five Soviet references are cited.

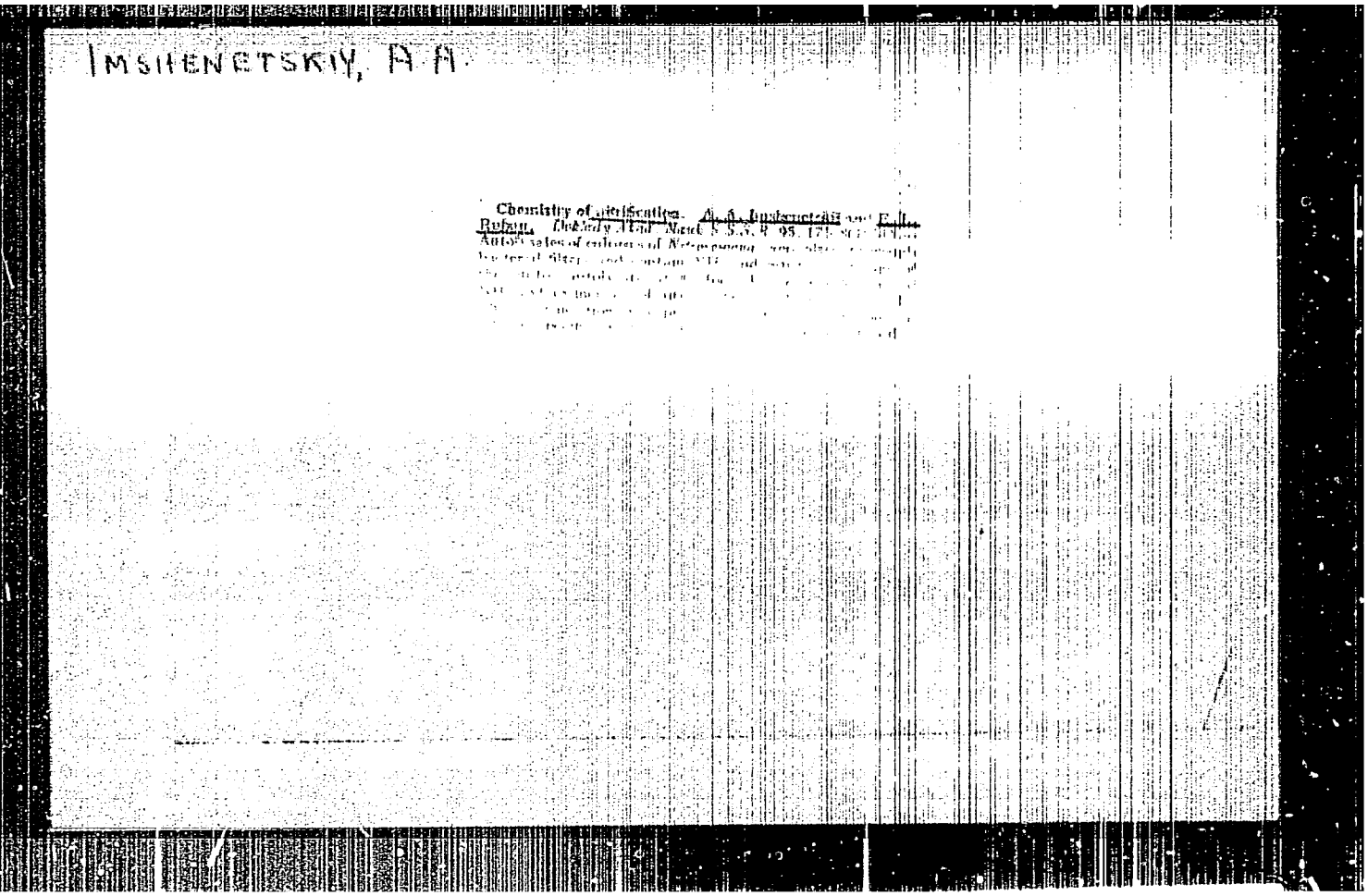
Institution : Institute of Microbiology, Academy of Sciences USSR

Submitted : 17 June 1954

IMSHENETSKIY, A.A.

Variability and selection of microorganisms. Priroda 43 no.5:35-44 My '54. (MLRA 7:5)

1. Chlen-korrespondent Akademii nauk SSSR. (Microorganisms)



IMSHENETSKIY, A.A.

LITVINOV, M.A.

Cellulose and bacteria ("Microbiology of cellulose." A.A.Imshenetskii. Reviewed by M.A.Litvinov). Priroda 43 no.8:124-126 Ag '54. (MLRA 7:8)
(Imshenetskii, A.A.) (Cellulose) (Bacteria)

1955-

Lunin

IMSHENETSKIY, A.A. (redaktor) KOLOSOVA, L.I., tekhnicheskiy redaktor.

[Isotopes in microbiology; transactions of the conference on the use of tagged atoms in microbiology] Izotopy v mikrobiologii; trudy konferentsii po primeneniiu mechenykh atomov v mikrobiologii. Moskva, Izd-vo Akademii nauk SSSR, 1955. 238 p. (MLRA 8:11)

1. Akademiya nauk SSSR. Institut mikrobiologii. 2. Chlen-korrespondent AN SSSR (for Imshenetskiy)
(Radioisotopes) (Microbiology)

IMSHENETSKIY, A.A., redaktor; SHEMAKHANOVA, N.M., redaktor; SHEVCHENKO, G.N., tekhnicheskiy redaktor.

[Proceedings of the conference on mycotrophy of plants] Trudy konferentsii po mikotrofii rastenii. Moskva, 1955. 352 p. (MLRA 8:11)

1. Akademiya Nauk SSSR. Institut mikrobiologii.
(Mycorhiza)

USSR/ Biology - Microbiology

Card 1/1 Pub. 124 - 8/40

Author : Imshenetskiy, A. A., Memb. Corresp., Academ. of Sc., USSR

Title : Selection of fungi cultures for fermentation industry

Periodical : Vest. AN SSSR 1, 46-48, Jan 1955

Abstract : Biological data are presented on the selection of fungi cultures (Aspergillus oryzae cultures) of plant and animal origin necessary for the fermentation industry. Table

Institution : .....

Submitted : .....

IMSHENETSKIY, A. A.

Myxobacteria mistaken for nitrifying bacteria. Mikrobiologiia 24 no.1:14-21 Ja-F '55. (MLRA 8:4)

1. Institut mikrobiologii Akademii nauk SSSR, Moskva.

(MYXOCOCCUS,
differentiation from Nitrosomonas)
(NITROSOMONAS,
differentiation from Myxococcus)

IM SHENETSKIY, A.A.

Acclimatization of yeasts to poisons. A. A. Imshenetskii and K. Z. Perova (Inst. Microbiol., Acad. Sci. U.S.S.R., Moscow). *Mikrobiologiya* 24, 147–50(1955).—Resistance of *Saccharomyces cerevisiae* was increased about 10-fold (from 1:80,000 to 1:8500) in mediums with increasing $HgCl_2$ concns. The adaptation required 393 passes with small concn. gradients. Resistance to PhOH was similarly increased about 8-fold (from 1:4000 to 1:500) in 400 passes. If a concn. increment does significant harm the culture must be taken back to a lower concn. for a less abrupt return to the concn. at which resistance was inadequate. I. F. S.

62

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IMSHENETSKIY, A. A.

62 Physiological properties of microorganism strains obtained with the aid of intensified factors. A. A. Imshenetskii (Inst. Microbiol., Acad. Sci. U.S.S.R., Moscow). *Mikrobiologiya* 24, 285-90(1955).—Mutants of *Penicillium* species have reached 70 times the initial capacity to form penicillin; *Aspergillus* mutants have had their amylolytic and proteolytic activities enhanced; and *Saccharomyces cerevisiae* has been activated, by intensifying such factors as irradiation and aeration. Weakened and degenerative forms commonly accompany the development of activated strains. Selection is facilitated by morphological differences by which unwanted strains can be detected and discarded. J. F. S.

IMSHENETSKIY, A.A.

"Bacterial physiology." Reviewed by A.A.Imshenetskii. Mikrobiologiia 24 no.4:486-495 Jl-Ag '55 (MLRA 8:11)
(BACTERIA)

IMSHENETSKIY, A.A.

Noncellular nitrification. III. Kinetics of nitrite accumulation. A. A. Imshenetskii, B. L. Rubin, and O. D. Ruzina (Inst. Microbiol., Acad. Sci. U.S.S.R., Moscow). *Mikrobiologiya* 24, 539-44(1955); cf. *C.A.* 49, 12934h.—Cell-free filtrates from *Nitrosomonas europea* retain enough enzyme activity for copious oxidation of NH_4 to nitrite, reaching a peak reaction rate on the 1st or 2nd day and tapering off after the 5th day. Usually the peak nitrite content in the culture is reached in 19–27 days, followed by a decrease. Not all the evolved NH_3 appears as nitrite; the deficit is greater in acellular filtrates than in cell cultures. Total N content remains const. in both cases (no deficit at the end). Comparative tests with *Mycobacterium rubrum* showed copious NH_4 formation but only slight oxidation to nitrite. Julian P. Smith

IMSHENETSKIY, A. (A.)

IMSHENETSKIY, A; KASHKIN, P.; KONOKOTINA, A.; KRASIL'NIKOV, N.; KRISS, A.; KUDRYAVTSE, V.; LITVINOV, M.; MEYSEL', M.; RAUTENSHTEYN, Ya.

Aleksandra Alekseevna Bachinskaia; obituary. Mikrobiologiia 24 no.5:650-651 S-O '55. (MLRA 9:1)
(BACHINSKAIA, ALEKSANDRA ALEKSEEVNA, 1878-1955)

IMSHENETSKIY, A.A.

Selection of yeast cultures for the ferment industry. Vest. AN SSSR 25 no.1:46-48 Ja '55. (MLRA 8:3)

1. Chlen-korrespondent Akademii nauk SSSR.
(Yeast)

IMSHENETSKIY, A.A.

USSR/Biology - Microbiology

Card 1/1 Pub. 124 - 7/32

Authors : Imshenetskiy, A. A., Memb. Corresp., Acad. of Sc., USSR

Title : About the perspectives in the development of microbiology

Periodical : Vest. AN SSSR 25/6, 44-51, June 1955

Abstract : The prospects for the development of microbiological science and industry in the USSR are debated. The problems and difficulties facing microbiologists are listed. It is pointed out that the most important contribution to the development of microbiology was the explanation of the role assumed by the microorganism in the fertility of the soil.

Institution : .....

Submitted : .....

IMSHENETSKIY, A. A.

"Experimental Variation in Micro-Organisms", paper given at the International Genetics Symposia, 6-12 Sept 1956, English translation

So: 3069259, 26 Dec 56

NOVOGRUDSKIY, David Moiseyevich, 1898-1953; IMSHENETSKIY, A., redaktor

[Soil microbiology (soil as a habitat for soil micro-organisms); principle groups of the soil micropopulation] Pochvennaia mikrobiologiia (pochva kak sreda mestoobitaniia pochvennykh mikroorganizmov); osnovnye gruppy pochvennogo mikronaseleniia) Alma-Ata, Akademiia nauk Kazakhskoi SSR, 1956. 401 p. (MLRA 10:2)
(Soil micro-organisms)

KOSTYCHEV, Sergey Pavlovich, 1877-1931; IMSHENETSKIY, A.A., redaktor; MEDIN, N.I., redaktor; ASTAF'YEVA, T.A., tekhnicheskiy redaktor.

[Selected works on the physiology and biochemistry of microorganisms] Izbrannye trudy po fiziologii i biokhimii mikroorganizmov. Moskva, Izd-vo Akademii nauk SSSR. Vol.1. 1956. 354 p. (MLRA 9:4)

1.Chlen-korrespondent AN SSSR (for Imshenetskiy)
(MICRO-ORGANISMS)

IMSHENETSKIY, A. A.

Obtaining cell-free liquid from Azotobacter cultures. A. A. Imshenetskii, L. I. Solntseva, K. Z. Petrova, and N. F. Kuranova (Inst. Microbiol., Acad. Sci. U.S.S.R., Moscow). *Mikrobiologiya* 25, 164–70(1956).—For high N-fixing capacity *A. chroococcum* should be cultured in thick, non-nitrogenous media; sugar utilization is then complete in 21–42 hours. All tested cultures had about the same capacity, 15.8–18.1 mg. N/g. of glucose. The best method for destroying the *Azotobacter* cells is grinding with Al_2O_3. For a mucilaginous consistency of the cell-free liquid it is best to centrifuge in water, which may be phosphate buffered; the centrifuged liquid is not totally cell-free. I. F. Smith

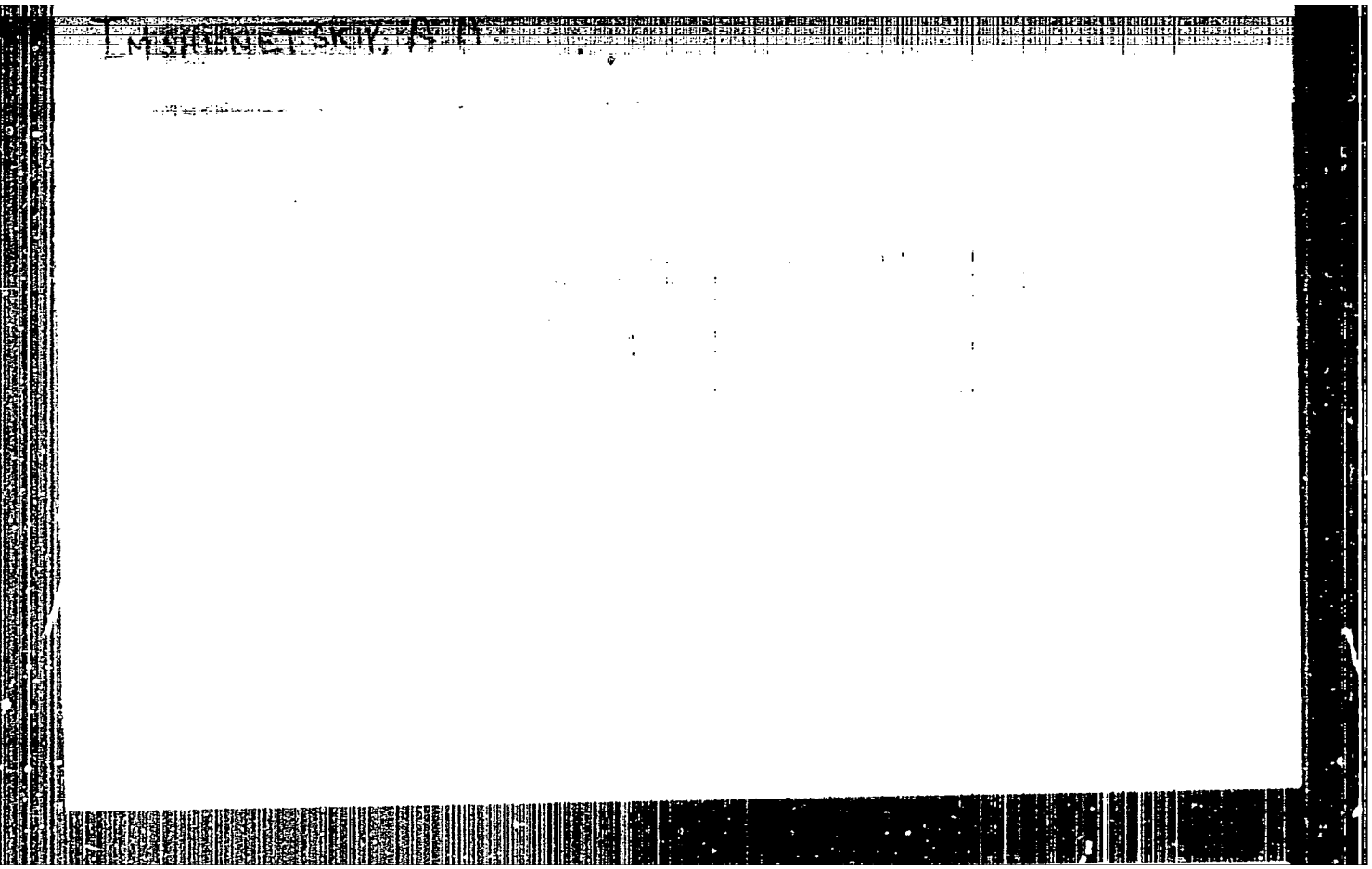
IMSHENETSKIY, A.A.

Noncellular nitrification. IV. Inactivating thermophilic Nitrosomonas europaea enzymes which oxidize ammonia. A. A. Imshenetskii, E. L. Rulian, and L. I. Artemova (Inst. Microbiol., Acad. Sci. U.S.S.R., Moscow). *Mikrobiologiya* 25, 12-15(1956); cf. *C.A.* 50, 8803c.—Filtered *N. europaea* autolyzate retains its power to oxidize NH_3 even after brief boiling, but is inactivated by boiling 30 min. or autoclaving 10 min. (0.5 atm.). In this thermophilic property it resembles peroxidase systems. I. F. S.

IMSHENETSKIY, A.A.

Louis Pasteur and contemporary general microbiology; 60th anniversary of his death. Mikrobiologiia 25 no.1:115-124 Ja-F '56 (MIRA 9:5)

(BIOGRAPHIES,
Pasterur, Louis (Rus))

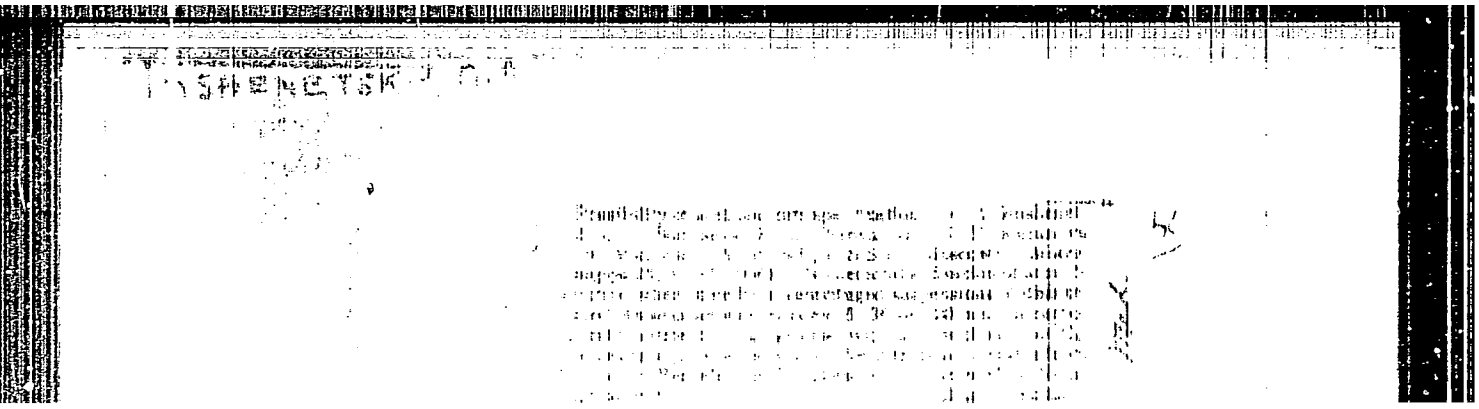


IMSHENETSKII, A A

Results of discussions on problems in soil microbiology.
A [illegible] Mikrobiologiya 23, 331-41(1954).—[illegible] research techniques.

IMSHENETSKIY, A.A.

Practical use of nitrifying bacteria in the 17th century. Mikrobiologiia 25 no.3:376-379 My-Je '56. (MLRA 9:10)
(BACTERIA, NITRIFYING) (SALTPETER)



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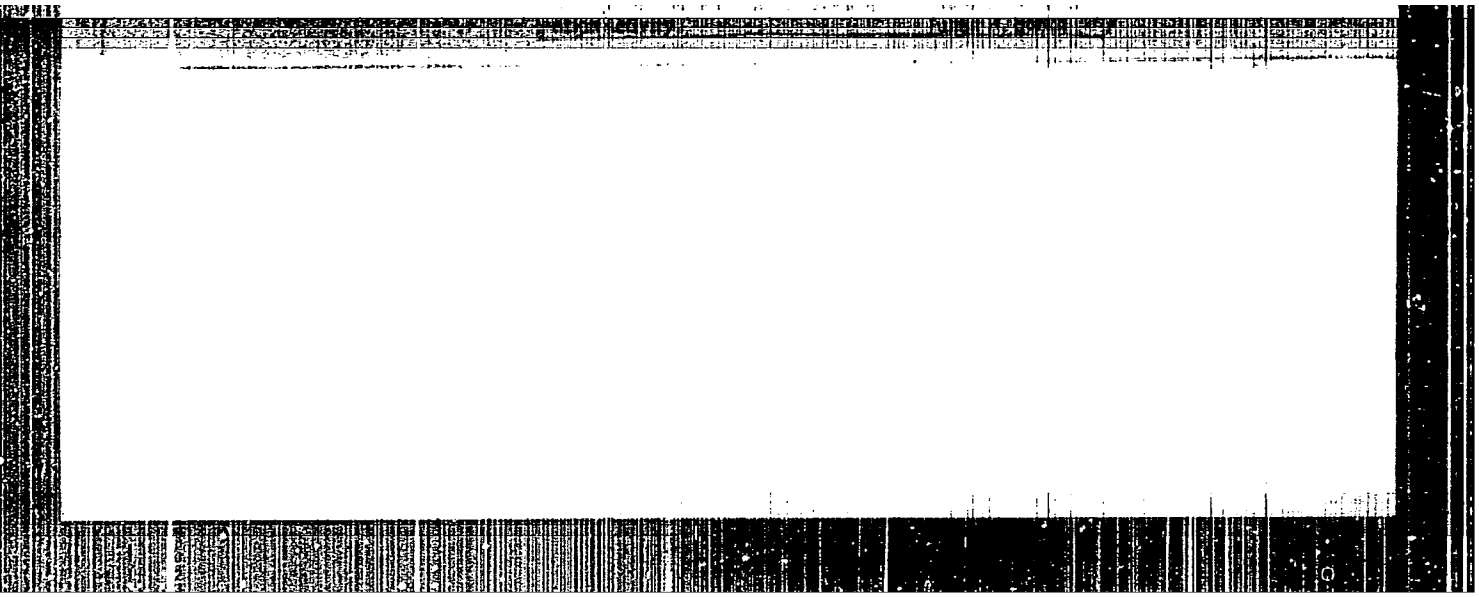

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618610006-3"

IMSHENETSKIY, A.A. [Imsenecki, A.A.]

"Cytology of bacteria." M.A.Peshkov. Reviewed by A.A.Imsenecki. Mikrobiologiia 25 no.4:508-513 Jl-Ag '56. (MLRA 9:10)
(BACTERIA) (PESHKOV, M.A.)

IMSHENETSKIY, A.

"Bacterial cytology" by M.A.Peshkov. Reviewed by A.Imshenetskii. Zhur.mikrobiol.epid. i immun. 27 no.12:106-109 D '56. (MLRA 10:1)
(CELLS) (BACTERIOLOGY) (PESHKOV, M.A.)

IMSHENETSKIY, A.A.

Ferments produced by micro-organisms and their industrial use. (MLRA 9:8)
Priroda 45 no.5:17-26 My '56.

1. Chlen-korrespondent Akademii nauk SSSR.
(Bacteriology--Cultures and culture media) (Enzymes)

IMSHENETSKIY, A.A.

BUTKEVICH, Vladimir Stepanovich; IMSHENETSKIY, A.A., otvetstvennyy redaktor; MATVEYENKO, G.A., redaktor izdatel'stva.

[Selected works] Izbrannye trudy. Moskva, Izd-vo Akad.nauk SSSR. Vol.1. 1957. 632 p. (MIRA 10:11)

1. Chlen-korrespondent AN SSSR (for Imshenetskiy).
(Protein metabolism) (Fungi) (Acids, Organic)
(Plants--Respiration)

IMSHENETSKIY, A.A.

USSR/General Division. Congresses. Sessions. Conferences. A-4

Abs Jour : Ref Zhur-Biologiya, No 3, 1958, 9315

Author : A. A. Imshenetskiy
Inst :
Title : A Symposium on Genetics in Japan

Orig Pub : Vestn. AN SSSR, 1957, No 1, 63-67

Abstract : Account of a symposium on genetics held in Japan in September 1956. The themes of the reports heard at the plenary sessions, including those of the Soviet geneticists, are reported and the names of the ten active sections of the symposium are given. Noted are the considerable successes achieved by the world geneticists in the investigation of the biochemical bases of heredity; polyploids; heterosis; cytology of cancer, and other problems which are of great

Card 1/2

IMSHENETSKIY, A.A.

USSR/General Division. Congresses. Sessions. Conferences. A-4

Abs Jour : Ref Zhur-Biologiya, No 3, 1958, 9316

Author : A. A. Imshenetskiy
Inst :
Title : International Symposium on Genetics in Tokyo (Sep 6 1956)
Orig Pub : Izv. AN SSSR ser. biol., 1957, No 3, 382-384

Abstract : No abstract

Card 1/1

Imshenetskiy, A. A.

IMSHENETSKIY, A.A.

Activity of microbiological research institutions in Japan.
Mikrobiologiia 26 no.2:248-254 Mr-Ap '57. (MIRA 10:10)
(MICROBIOLOGY
activity of research institutions in Japan (Rus))

F-1

USSR / Microbiology. General Microbiology.

Abs Jour : Ref Zhur - Biol., No 20, 1958, No. 90717

Author : ~~Imshenetskiy, A. A.~~; Perova, K. Z.
Inst : Not given
Title : Morphological and Physiological Characteristics of Yeast Adapted to Phenol and Mercuric Chloride

Orig Pub : Mikrobiologiya, 1957, 26, No 3, 297-305 (res. Eng.)

Abstract : A comparative study of two strains of Saccharomyces cerevisiae adapted to phenol and mercuric chloride showed a sharp difference in their morphological and physiological properties. Cells of the "phenolized" yeast were very large, elongated, often without vacuoles, and contained much fat and a little metachromatin; the nuclei were large, porous, polymorphous, and strained poorly. For the "mercuric chloride" yeast characteristic cells were small in size, round or polygonal in form, with large vacuoles

Card 1/2

USSR / Microbiology. General Microbiology. F-1

Abs Jour : Ref Zhur - Biol., No 20, 1958, No. 90717

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618610006-3"

which contained some metachromatic granules; the nuclei were small, compact, round with regular outlines, chromophilic; there was an insignificant amount of fat in the cells. The "mercuric chloride" yeast proved to be physiologically more active than the yeast adapted to phenol. Thus, in analytical experiments they fermented glucose more quickly and the "phenolized" more slowly than the original yeast. The obtained results verified the common theory about the existence of qualitatively different reactions of microorganisms to the effect of various physical factors. -- N. A. Avdiyevich

Card 2/2

IMSHENETSKIY, A.A.

Forty-year study of variability of micro-organisms in the U.S.S.R. Mikrobiologiia 26 no.6:632-650 N-D '57. (MIRA 11:3)
(MICROORGANISMS,
variability, research in Russia (Rus)

IMSHENETSKIY, A. A.

USSR/General Division. Congresses. Sessions. Conferences A-4

Abs Jour : Ref Zhur-Biologiya, No 3, 1958, 9317

Author : A. A. Imshenetskiy
Inst :
Title : International Symposium on Genetics

Orig Pub : Botan. zh., 1957, 42, No 4, 665-674

Abstract : No abstract

Card 1/1

IMSHENETSKIY, A.A.

Symposium on genetics in Japan. Priroda 46 no.4:49-54 Ap '57. (MLRA 10:5)

1. Chlen-korrespondent AN SSSR. Institut mikrobiologii Akademii nauk SSSR (Moskva).
(Japan--Genetics)

BUTKEVICH, Vladimir Stepanovich; IMSHENETSKIY, A.A., otvetstvennyy red.; MATVEYENKO, T.A., red.izd-va; ZELENKOVA, Ye.V., tekhn.red.

[Selected works] Izbrannye trudy. Moskva, Izd-vo Akad.nauk SSSR. Vol. 2. 1958. 389 p. (MIRA 11:6)

1. Chlen-korrespondent Akademii nauk SSSR (for Imshenetskiy)
(Bacteria)

IMSHENETSKIY, A.A.

Activities of the Institute of Microbiology of the Academy of Sciences of the U.S.S.R. during the past 25 years. Trudy Inst. mikrobiol. no.5:6-17 '58 (MIRA 11:6)

1. Institut mikrobiologii AN SSSR.
(MICROBIOLOGY,
Institute of Microbiol. of Acad. of Sciences of USSR (Rus))

30-58-4-10/44

AUTHOR: Imshenetskiy, A. A., Corresponding Member of the AS USSR

TITLE: In England's Microbiological Institutions (V mikrobiologicheskikh uchrezhdeniyakh Anglii)

PERIODICAL: Vestnik Akademii Nauk SSSR, 1958, , Nr 4, pp. 66-68 (USSR)

ABSTRACT: In the year 1956 Professor Kh. G. Tornton, a very well-known English microbiologist, was guest of the Soviet microbiologists. In October 1957 G. K. Skryabin, Candidate of Biological Sciences, and the author of this paper returned the visit. They came to see at first the microbiological division of the Rotamsted experimental station, which is a great scientific combinate. The microbiologists here have the possibility of carrying on their researches together with agrochemists, soil-chemists, botanists, biochemists, and phytopathologists. They deal there with problems of soil-microbiology, especially with the problem of Bulbous-bacteria. The author mentions that about the decomposition of cyclic compounds V. O. Tauson in the Soviet-Union wrote a detailed work.

Card 1/2

17(4)
AUTHOR: Imshenetskiy, A. A., Corresponding Member, SOV/30-58-11-13/48
AS USSR

TITLE: International Congress on Microbiology (Mezhdunarodnyy mikrobiologicheskiy kongress)

PERIODICAL: Vestnik Akademii nauk SSSR, 1958, Nr 11, pp 69 - 72 (USSR)

ABSTRACT: The 7th Congress on Microbiology was held in Stockholm from August 4 to 9. About 2000 persons from 45 countries participated in the meetings. The Soviet delegation consisted of P.Ye.Vizir', G.A. Zavarzin, N.D.Iyerusalimskiy, A.A.Imshenetskiy (head of delegation), N.A.Krasil'nikov, S.I.Kuznetsov, R.A.Kukaynis, L.G.Loginova, R.V.Feniksova. Also a large group of Soviet medical microbiologists and virologists headed by V.M.Zhdanov participated in the work of the congress. The Soviet scientists submitted 17 reports, 10 of which were actually delivered at the congress. Three Soviet scientists

Card 1/2

were vice-presidents of various sections. Some of them took part in the work of the International Taxonomical Committee which met during the Stockholm conference. The work of the congress was done in the following six sections: physiology and genetics of microbes; chemistry of microbes; immunology; virology; medical and veterinary microbiology; technical microbiology. A total of almost 500 reports were delivered at the congress. The scientific and industrial exhibitions as well as the scientific films shown at the congress were reported to have been highly interesting. The bulk of reports was devoted to the following three problems: microbe metabolism; growth, development, and multiplication; microbe genetics. The report on the use of microbes as agents for a chemical synthesis was considered especially impressive. The 8th Congress on Microbiology will probably be held in Montreal (Canada) in 1962.

IMSHENETSKIY, A.A.

BELOZERSKIY, A.N., IMSHENETSKIY, A.A., ZAYTSEVA, G.N., PEROVA, K.Z.

Comparative morphology and biochemistry of mucoid and matt and dull cultures of Azotobacter chroococcum [with summary in English]. Mikrobiologiia 27 no.2:150-156 Mr-Ap '58 (MIRA 11:5)

1. Institut mikrobiologii Akademii nauk SSSR i Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(AZOTOBACTER, culture
chroococcum, comparative morphol. & biochem. of slimy and dull cultures (Rus))

IMSHINETSKIY, A.A.

Microbiological laboratories in England. Mikrobiologiia 27 no.2 261-270 Mr-Ap '58 (MIRA 11:5)

(MICROBIOLOGY,
laboratories in Gt.Brit. (Rus))
(LABORATORIES,
microbiol. in Gt.Brit. (Rus))

IMSHENETSKIY A.A.

IYERUSALIMSKIY, N.D., IMSHENETSKIY, A.A., KOSIKOV, K.V., KRASIL'NIKOV, N.A. RAUTENSHTEYN, Ya.I.

Matus Osharovich Streshinskii; an obituary. Mikrobiologiia 27 no.2:271 Mr-Ap '58 (MIRA 11:5)
(STRESHINSKII, MATUS OSHAROVICH, 1912-1957)

IMSHENETSKIY, A.A., SOLNTSEVA, L.I.

Filtrable forms of bacteria [with summary in English]. Mikrobiologiia 27 no.3:276-282 My-Je '58 (MIRA 11:9)

1. Institut mikrobiologii AN SSSR.
(BACTERIA,
filtrable forms (Rus))

IMSHENETSKIY, A.A., KUZYURINA, L.A.

Searching in nature for yeasts assimilating pentoses [with summary in English]. Mikrobiologiia 27 no.4:489-496 Jl-Ag '58 (MIRA 11:9)

1. Institut mikrobiologii AN SSSR.
(YEASTS, metabolism
pentose-utilizing cultures (Rus))
(PENTOSES, metabolism
yeasts (Rus))

KRISS, Anatoliy Yevseyevich; IMSHENETSKIY, A.A., otv.red.; LITVINOV, M.A., red.izd-va; MOSKVICHEVA, N.I., tekhn.red.

[Marine microbiology (deep-sea microbiology)] Morskaia mikrobiologiia (glubokovodnaia). Moskva, Izd-vo Akad.nauk SSSR, 1959. 453 p. (MIRA 12:3)

1. Chlen-korrespondent Akademii nauk SSSR (for Imshenetskiy).
(Marine biology)

SOV/26-59-2-13/53

30(7)
AUTHOR: Imshenetskiy, A.A., Corresponding Member (Moscow)

TITLE: Urgent Problems of Microbiology (Aktual'nyye voprosy mikrobiologii) VII International Microbiological Congress in Stockholm (VII Mezhdunarodnyy mikrobiologicheskiy kongress v Stokgol'me)

PERIODICAL: Priroda, 1959, Nr 2, pp 73-75 (USSR)

ABSTRACT: The above-mentioned Congress took place in Stockholm in August 1958. About 2,000 scientists took part in it. The Soviet delegation was composed of: A.A. Imshenetskiy (head of the delegation), P.Ye. Vizir', G.A. Zavarzin, N.D. Iyerusalimskiy, N.A. Krasil'nikov, S.I. Kuznetsov, R.A. Kukaynis, L.G. Loginova, G.K. Skryabin and R.V. Feniksova. All papers read at the Congress were concerned with three problems: 1) the metabolism of microbes; 2) the problem of growth, development and reproduction of microorganisms;

Card 1/2

IMSHENETSKIY, A.A.

Results of the Seventh International Microbiological Congress.
Izv. AN SSSR Ser.biol. 24 no.1:144-146 Ja-F '59. (MIRA 12:2)
(STOCKHOLM--MICROBIOLOGY--CONGRESSES)

IMSHENETSKIY, A.A.

Reports on general microbiology at the Seventh International Congress of Microbiology. Mikrobiologiia 28 no.1:116-139 Ja-F '59. (MIRA 12:3)

(MICROBIOLOGY)

IMSHENETSKIY, A.A.; PEROVA, K.Z.; ZAYTSEVA, T.A.; BELOZERSKIY, A.N.

Transmission of streptomycin resistance in staphylococci by means of desoxyribonucleic acid. Mikrobiologiia 28 no.2: 187-190 Mr-Ap '59. (MIRA 12:5)

1. Institut mikrobiologii i Institut biokhimii AN SSSR.
(STREPTOMYCIN, eff.
on Micrococcus pyogenes, transfer of resist. with desoxyribonucleic acid (Rus))
(MICROCOCCUS PYOGENES, eff. of drugs on, streptomycin, transfer of resist. with desoxyribonucleic acid (Rus))
(DESOXYRIBONUCLEIC ACID,
on Micrococcus pyogenes, transfer of streptomycin-resist. (Rus))

IMSHENETSKIY, A.A.

Report of the Rothamsted Experimental Station for 1958. Mikrobiologiia 28 no.6:950-953 N-D '59. (MIRA 13:4)
(GREAT BRITAIN--SOIL BACTERIOLOGY--RESEARCH)

17(2,10)

SOV/20-124-4-56/67

AUTHORS: Imshenetskiy, A. A., Corresponding Member AS USSR, Solntseva, L.I., Kuranova, N. F.

TITLE: Experimental Generation of Active Variants of Citric-Acid-Producing Aspergrillus Niger (Eksperimental'noye polucheniye aktivnykh variantov Aspergillus niger, obrazuyushchikh limonnuyu kislotu)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 4, pp 925-927 (USSR)

ABSTRACT: It is a well-known fact that micro-organism mutants produced by the influence of radiant energy possess, as a rule, reduced biochemical activity. Some of them belong to the subletal variants and perish on transplantation, others show definite signs of degeneration, form only small colonies, grow slowly, partially or totally lose the activities of various ferment systems, etc. The development of mutants that possess more active ferment complexes, or that effect the biosynthesis of certain substances more intensively than the initial form does,, are comparatively rare. However, these mutants are of particular interest. In the course of these 10 years it has been possible to produce, by the employment of radiant energy in bacteria, yeast and mold fungi, a number of practically utilizable mutants (e.g. Penicillium chrysogenum with a penicillin quantity of 100 times that of the wild initial form).

Card 1/3

Experimental Generation of Active Variants of Citric Acid-Producing Aspergillus Niger

Citric acid is obtained from a culture of Aspergillus niger, which latter oxidizes saccharose into the acid. As the currently used strains of Aspergillus did not include any irradiation-produced variants, the authors studied the physiology of the variants produced by means of ultraviolet light irradiation. The initial culture was the 6/5 developed in the Leningradskiy zavod limonnoy kisloty (Leningrad Plant for Citric Acid). The 1-conidial cultures obtained from it had the same activities with regard to the production of the acid as the initial culture. The cultivation of one of the former was continued. The study of this capacity in individual mutants has facilitated the selection of the most promising cultures (T_1, T_2, and X), all of which produced more acid than the initial culture had done. They developed after the administration of 4 doses of ultraviolet irradiation. Their genealogies are shown in figure 1. Mutant T_1 differed also with regard to morphology.

Table 1 shows the formation dynamics of citric acid. From this the following conclusions are derived: (1) The mycelium dry weight of mutant T_1 is 25-30 % lower than that of the initial form. (2) Per

 1 g dry mycelium, the ultraviolet mutant consumes 26-51 % more

Experimental Generation of Active Variants of Citric-Acid-Producing Aspergrillus Niger

sugar than the initial form does. (3) Per 1 g dry mycelium, the mutant forms 46-84 % more citric acid than the initial form does. The absolute acid quantity is 16-22 % higher in the mutant culture medium. (4) The citric acid yield, calculated per sugar consumed, varies with the age of the culture, and is 50.7-63.4 % in the initial culture, and 57.7-74.3 % in the mutant. As is the case in the initial strain, the mutants produce almost exclusively citric acid. The above mentioned increased acid yield cannot be explained by a lower sugar consumption for mycelium formation, and is dependent on the biochemical activity of the culture.-There are 1 figure and 1 table.

ASSOCIATION: Institut mikrobiologii Akademii nauk SSSR
(Institute of Microbiology of the Academy of Sciences, USSR)

SUBMITTED: October 30, 1958

Card 3/3

IMSHENETSKIY, A. A. Dir, Inst. Microbiology, AS USSR

"Ban Biological Weapons."

paper presented at the Pugwash Conference on Disarmament and World Security, Moscow, 27 Nov-6 Dec 60.

LOGINOVA, Lyubov' Gavrilovna; IMSHENETSKIY, A.A., otv.red.; MATVEYENKO, T.A., red.izd-va; SUSHKOVA, L.A., tekhn.red.

[Fiziology of experimentally produced thermophilic yeasts] Fiziologiia eksperimental'no poluchennykh termofil'nykh drozhzhei. Moskva, Izd-vo Akad.nauk SSSR, 1960. 217 p. (MIRA 13:2)

1. Chlen-korrespondent AN SSSR; rukovoditel' Otdela nasledstvennosti i izmenchivosti mikroorganizmov Instituta mikrobiologii AN SSSR (for Imshenetskiy).
(Yeast)

PASTER, Lui [Pasteur, Louis] [deceased]; IMSHENETSKIY, A.A., red.; KOLPAKOVA, Ye.A., red.izd-va; DOROKHINA, I.N., tekhn.red.

[Selected works in two volumes] Izbrannye trudy v dvukh tomakh. Red.A.A.Imshenetskogo. Moskva, Izd-vo Akad.nauk SSSR. Vol.2. 1960. 834 p. (MIRA 14:1)

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1. Institut mikrobiologii AN SSSR (Moskva).
(STREPTOCOCCUS LACTIS)
(LIBERMAN, L.A.)

IMSHENETSKIY, A.A.; SOLNTSEVA, L.I.; KURANOVA, N.F.

Experimental variability of Aspergillus niger. Part 1: Morphological characteristic of variants obtained as a result of the action of ultraviolet rays. Mikrobiologiia 29 no.2:177-183 Mr-Ap '60. (MIRA 14:7)

1. Institut mikrobiologii AN SSSR.
(ASPERGILLUS) (ULTRAVIOLET RAYS—PHYSIOLOGICAL EFFECT)

IMSHENETSKIY, A.A.

S.A.Waksman; on his 70th birthday. Mikrobiologiia 29 no.2:310-312 Mr-Ap '60. (MIRA 14:7)
(WAKSMAN, SELMAN ABRAHAM, 1888-)

VYSHELESSKIY, A.N.; ZABOLOTSKIY, M.S.; YEREMENKO, V.V.; IMSHENETSKIY, A.A.; KOZIN, N.I.; KOZLOV, V.V.; LEDOVSKIKH, S.I.; LOBANOV, D.I.; MUNDRETSOVA, K.A.; RAZUMOV, A.S.; RAUTENSHTEYN, Ya.I.

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(ASPERGILLUS NIGER) (CITRIC ACID)
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IMSHENETSKIY, A.A.; PEROVA, K.Z.

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(STAPHYLOCOCCUS AUREAU) (DESOXYRIBONUCLEIC ACID)
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Life at high temperatures. Priroda 49 no.8:19-24 Ag '60.
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1. Chlen-korrespondent AN SSSR.
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IMSHENETSKIY, Aleksandr Aleksandrovich; KOLPAKOVA, Ye.A., red. izd-va; MAKUNI, Ye.V., tekhn. red.

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IMSHENETSKIY, A.A.

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IMSHENETSKIY, A. A.; MANSUROVA, S. E.

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1. Institut mikrobiologii AN SSSR.

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(CAIRO—MICROBIOLOGY)

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Microbiological research in the United States. Vest.AN SSSR 31 no.6: 72-75 Je '61. (MIRA 14:6)

1. Chlen-korrespondent AN SSSR.
(United States—Microbiological research)

IMSHENETSKIY, A.A.

Present-day tasks of general microbiology. Vest. AN SSSR 31 no.10:43-52 O '61. (MIRA 14:9)

1. Chlen-korrespondent AN SSSR.
(MICROBIOLOGICAL RESEARCH)

IMSHENETSKIY, A.A.; UL'YANOVA, O.M.

Experimental production of Fusarium variants synthesizing increased amounts of gibberellin. Dokl.AN SSSR 138 no.5:1204-1207 Je '61. (MIRA 14:6)

1. Institut mikrobiologii AN SSSR. 2. Chlen-korrespondent AN SSSR (for Imshenetskiy).
(FUSARIUM) (GIBBERELLINS) (ULTRAVIOLET RAYS--PHYSIOLOGICAL EFFECT)

KUZNETSOV, S.I.; IVANOV, M.V.; LYALIKOVA, N.N.; IMSHENETSKIY, A.A., otv. red.; SHCHERBAKOV, A.P., red. izd-va; SHEVCHENKO, G.N., tekhn. red.

[Introduction to geological microbiology] Vvedenie v geologicheskuiu mikrobiologiiu. Moskva, Izd-vo Akad. nauk SSSR, 1962. 238 p. (MIRA 15:3)

1. Chlen-korrespondent Akademii nauk SSSR (for Imshenetskiy). (Geology) (Microbiology)

IMSHENETSKY, A. A.

"On Perspectives of development of Exobiology"

Soviet Papers Presented at Plenary Meetings of Committee on Space Research (COSPAR) and Third International Space Sumposium, Washington, D. C., 23 Apr - 9 May 62

DASHENETSKIY, A. A.

"Selection of Microorganisms"

report presented at the 8th International Congress for Microbiology, Montreal, Canada, 19-24 Aug 62.

S/865/62/001/000/003/033
E028/E185

AUTHOR: Imshenetskiy, A.A.

TITLE: The possibility of the existence and methods of detection of extraterrestrial life

SOURCE: Problemy kosmicheskoy biologii. v.1. Ed. by N.M. Sisakyan. Moscow, Izd-vo AN SSSR, 1962. 137-144

TEXT: This is the text of a report at the Soveshchaniye po kosmicheskoy biologii (Conference on Cosmic Biology), held in Moscow (August 17, 1961).
The author briefly reviews past and present views on the origin of life and the possibility of the interplanetary transport of life forms by means of radiation pressure. It is simpler in principle to suppose that life forms on other planets will resemble terrestrial unicellular organisms, rather than to postulate the existence of types of metabolism not based on water and carbon. Such organisms can withstand liquid helium temperatures, but -10 °C appears to be the lower limit at which multiplication has been observed. Some thermophilic bacteria can withstand boiling

Card 1/2

The possibility of the existence... S/865/62/001/000/003/033
E028/E185

for 4 - 5 days, and the author postulates that organisms could have become adapted to temperatures up to 150 °C on other planets. Many lower terrestrial forms are sufficiently radioresistant to withstand the effects of cosmic radiation, but resistance to ultraviolet radiation is much lower. The absence of oxygen is immaterial, as many terrestrial organisms can grow under anaerobic conditions. The author discusses in conclusion various methods proposed for automatically recording the existence of life forms from a vehicle which has landed on a planet.

Card 2/2

IMSENETKI, A.A. [Imshenetskiy, A.A.]

Present tasks of general microbiology. Analele biol 16 no.2:70-81 Mr-Ap '62.

1. Membru corespondent al Academiei de Stiinte a U. R. S. S.

IMSHENETSKIY, A.A.; UL'YANOVA, O.M.

Obtaining mutants from Fusarium producing gibberellin. Mikrobiologiia 31 no.4:628-635 Jl-Ag '62. (MIRA 18:3)

1. Institut mikrobiologii AN SSSR.

IMSHENETSKIY, A.A.; UL'YANOVA, O.M.

Effect of the meatbolites of Fusarium mutants on higher plants.
Mikrobiologiia 31 no.6:1029-1037 N-D '62. (MIRA 16:3)

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(FUSARIUM) (GROWTH PROMOTING SUBSTANCES)

DSHENETSKIY, A.A.

"Enzymes in industry" by A.S. TSyperovich. Reviewed by A.A. Dshenetskii. Mikrobiologiia 31 no.6:1129-1130 N-D '62. (MIRA 16:3)

(ENZYMES) (INDUSTRIAL MICROBIOLOGY)

IMSHENETSKIY, A.A., akademik

Space biology as a new field of scientific research.
Vest. AN SSSR 32 no.11:58-63 N '62. (MIRA 15:11)
(Space biology)

GUTINA, Vera Nikolayevna; IMSHENETSKIY, A.A., akademik, otv. red.; RUBIN, Ye.L., red.izd-va; GUS'KOVA, O.M., tekhn. red.

[Physiology of nitrifying bacteria; a historical essay] Fiziologiia nitrifitsiruiushchikh bakterii; istoricheskii ocherk. Moskva, Izd-vo Akad. nauk SSSR, 1963. 165 p. (MIRA 16:5)
(BACTERIA, NITRIFYING)

IMSHENETSKIY, A. A.,

"Biosynthesis of Vitamin B12 by Different Microorganisms and the Influence of Conditions for Cultivation"

Report to be presented at Medical Society of J. E. PURKYNE, Czech, Vitaminological Cong., Prague, Czech., 3-6 Jun 63

IMSHENETSKIY, A. A.

"Sterilisation by Radiation and Vitamins"

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IDSHEMETSKIY, A.A.

Life and Space

Report to be submitted for the 4th International Space Science Symposium (COSPAR) Warsaw, 2-12 June 63

IMSHENETSKIY, A.A., akademik; MISHUSTIN, Ye.N.; LOZINOV, A.B., kand.biolog. nauk; KRINOV, Ye.L., doktor geol.-miner. nauk; KVASHA, L.G., kand. geol.-miner.nauk, starshiy nauchnyy sotrudnik; YAVNEL', A.A., kand. fiz.-mat. nauk, starshiy nauchnyy sotrudnik

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1. Direktor Instituta mikrobiologii AN SSSR (for Imshenetskiy). 2. Chlen-korrespondent AN SSSR (for Mishustin). 3. Uchenyy sekretar' Komiteta po meteoritam AN SSSR. (for Krinov). 4. Komitet po meteoritam AN SSSR (for Kvasha, Yavnel').

IMSHENETSKIY, A.A.

Eighth International Microbiological Congress. Izv. AN SSSR. Ser. biol. no.2:316-322 Mr-Ap '63. (MIRA 17:5)

IMSHENETSKIY, A.A.

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IMSHENETSKIY, A.A.; ZHIL'TSOVA, G.K.

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IMSHENETSKIY, A.A.

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IMSHENETSKIY, A.A.

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IMSHENETSKIY, A. A., akademik

Eighth Microbiological Congress. Vest. AN SSSR 33 no.1:66-69 Ja '63. (MIRA 16:1)

(Microbiology—Congresses)